

Appl. No. 09/873,564

Reply of Appellant

Reply to Examiner's Answer of 12 December 2005

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**IN THE UNITED STATES PATENT AND TRADEMARK  
OFFICE BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Appl. No. : 09/873,564  
Appellant(s) : VAN DOMMELEN, Mark J., et al.  
Filed : 4 April 2001  
Title : HIGH-PRESSURE DISCHARGE LAMP  
TC/A.U. : 2841  
Examiner : LEVI, Dameon E.  
Atty. Docket : BE 000011

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*Feb. 10, 2006*

By:

*John C. Fox*

**APPELLANT'S REPLY**

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Sir:

**REPLY OF APPELLANT**

This Reply of Appellant is in response to the Examiner's  
Answer dated 12 December 2005. All requisite fees set forth in  
37 CFR 1.17(c) for this Brief are hereby authorized to be  
charged to Deposit Account No. 501,850.

**Claim 1**

Regarding the rejection of claim 1 under 35 USC 103(a) as  
being unpatentable over Verschueren in view of Whitman, in  
response to Appellant's argument that Whitman does not teach or  
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suggest a high-pressure discharge lamp with an outer envelope, the Examiner answered that Whitman teaches that the light source may either be an arc discharge or a filament (col. 1, lines 56, 57); that other lamps, lamp types and lamp configurations can also be used (col. 2, lines 56-58); and that the lamp may be surrounded by a shroud with a light-diffusing coating (col. 2, line 65 - col. 3, line 2), and that it would have been obvious in view of these teachings to add a light-scattering coating to the outer bulb of Verscheuren (Answer, page 7).

While Whitman does not explain the meaning of the term 'shroud', it is a common term of art in the lighting industry, meaning an open structure, not a sealed envelope, which surrounds the lamp filament or discharge vessel. See, for example, Williamson et al. U.S. patent 6,930,443 B2, where a shroud surrounds a discharge vessel (Fig. 1 and col. 2, line 54), and Auyang U.S. patent 6,225,731 B1, where a shroud surrounds a filament inside a filament lamp.

Whitman only mentions the use of a shroud in connection with the incandescent (filament) lamps of Fig. 2; Whitman does not teach or suggest such use for a discharge lamp. Whitman's teaching with respect to discharge lamps is limited to placing the light-scattering coating directly on the outer surface of the discharge vessel.

Moreover, even if Whitman did teach the use of such a light-scattering shroud for a discharge lamp, it would not suggest the use of a light-scattering coating on the outer envelope of such a lamp.

In fact, the specific teachings of Whitman regarding placement of light-scattering coatings directly on the outer surface of a discharge lamp, and placement on a shroud

surrounding an incandescent lamp, **while never mentioning or even hinting at placement on an outer envelope**, would lead the skilled artisan away from Appellant's invention.

The general statement of Whitman that 'Other lamps, lamp types and lamp configurations can also be used in accordance with the invention' does not teach or suggest the skilled artisan to add a light-scattering coating to the outer envelope of discharge lamp.

Moreover, Appellant combines a **tubular-shaped outer bulb** and a light-scattering layer, in order to avoid incurring an unacceptable thermal load. Verscheuren and Whitman, whether each is taken alone or both are taken in combination, fail to teach or suggest such a unique combination of features.

### Claim 3

Regarding the rejection of claim 3 under 35 USC 103(a) over Verschueren in view of Whitman and further in view of Kinczel and Thornton, in response to Appellant's argument that Kinczel does not mention a light-scattering layer or an electrostatic process for a light-scattering layer, the Examiner answered that Kinczel teaches electrostatic coating processes (col. 7, lines 63-68; col. 8, lines 14-16) and that such processes would therefore have been contemplated by one skilled in the art (Answer, pages 7 and 8).

The entire discussion of Kinczel with respect to electrostatic coating relates to the luminescent phosphor coatings, not to light-scattering coatings, and occurs in a single sentence: 'The luminescent coating 2 can be prepared by any known method, especially the electrostatic methods are preferred (col. 8, lines 13-15).

The fact that electrostatic coating methods are known for luminescent materials would not lead the skilled artisan to conclude that such processes might be suitable for light-scattering coatings. Light-scattering coatings have different functions, and therefore the coating materials and resulting coatings have different physical and chemical properties than do luminescent coating materials and coatings. The skilled artisan, being aware of these differences, would not assume that luminescent coating processes could be applied to light-scattering layers.

Also regarding the rejection of claim 3 under 35 USC 103(a) over Verschueren in view of Whitman and further in view of Kinczel and Thornton, in response to Appellant's argument that Thornton would not suggest the addition of a light-scattering layer to Verschueren's lamp, the Examiner answered that Thornton teaches electrostatic coating processes (col. 3, line 60-col. 4, line 2) and that such processes would therefore have been contemplated by one skilled in the art (Answer, pages 7 and 8).

The entire discussion of Thornton with respect to electrostatic coating also relates to the luminescent phosphor coatings, not to light-scattering coatings, and occurs in the sentence beginning at col. 3, line 59, and reads in pertinent part as follows: '... the mixed finely-divided (phosphor) materials are coated as a layer 34 ... using either a liquid coating technique or a dry electrostatic precipitation technique ... '.

Significantly, in the discussion of the application of a light-scattering layer occurring at col. 4, lines 18-25, there is no mention of the coating technique, and specifically, no mention that any electrostatic coating technique would be

suitable for such a coating.

Thus, Thornton reinforces the impression provided by Kinczel that electrostatic coating techniques, while suitable for phosphor materials, cannot be assumed to be suitable for light-scattering coatings as well.

In regard to the rejection of claim 3 under 35 USC 103(a) over Verschueren in view of Whitman and further in view of Carleton, in response to Appellant's argument that Carleton teaches that a light-scattering layer provided on the inner surface of an outer bulb has disadvantages and is to be avoided, the Examiner answered that, although the optical behavior of the lamp may be of lower quality, Carleton still teaches that such a coating is well-known.

However, in the context of a rejection over a combination of references under Section 103(a), the test is not whether the references anticipate the claimed invention, but rather whether the claimed invention would have been obvious in view of the combined teachings of the references, i.e., whether the reference teachings suggest the claimed invention.

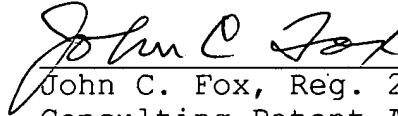
As already pointed out, Carleton clearly teaches that a light-scattering coating on the bulb envelope is to be avoided. Thus, Carleton not only fails to suggest the claimed invention, but actually leads the skilled artisan away from the invention.

As stated in Appellant's Brief, Appellant's invention is particularly unexpected and surprising in view of Carleton, since Appellant combines a **tubular-shaped outer bulb** and a light-scattering layer, without incurring an unacceptable thermal load.

In summary, none of the cited references, whether taken alone or in any combination, teach or suggest such a unique combination of features.

In view of the foregoing, Appellant respectfully requests that the Board reverse the rejections of record.

Respectfully submitted,

  
John C. Fox, Reg. 24,975  
Consulting Patent Attorney  
203-329-6584

APPENDIX

CLAIMS ON APPEAL

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1. A high-pressure discharge lamp comprising a discharge vessel which is enveloped with clearance by an outer bulb provided with a lamp cap, which outer bulb is translucent, is substantially tubular in shape, and is provided with a light-scattering layer.
3. A lamp as claimed in claim 1, characterized in that the light-scattering layer forms an electrostatic coating.
4. A lamp as claimed in claim 1, characterized in that the outer bulb is internally provided with the light-scattering layer.